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APPLICATION

Of

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For

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On

DISPLAY RACK FOR GOLF CLUBS

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DISPLAY RACK FOR GOLF CLUBS

BACKGROUND OF THE INVENTION

This application claims the benefit of U.S. Provisional Application No. 60/397,324, filed July 19, 2002.

This invention relates generally to a display rack for supporting and displaying golf clubs in a retail or other sales environment or the like. More particularly, this invention relates to a golf club display rack including means for supporting and retaining a plurality of golf clubs in an attractive yet readily accessible array, and further in a manner compatible with attachment of a security tag to each displayed golf club.

Golf clubs are generally well known in the art, to include a club head such as a wood-type or iron-type club head mounted at a lower end of an elongated club shaft. An upper end of the club shaft has a resilient grip mounted thereon and designed for comfortable manual grasping and swinging of the golf club to strike a golf ball. In modern golf clubs, the wood-type or iron-type club head is commonly formed from a cast, forged, and/or machined metal or metal alloy such as stainless steel, titanium alloy, and the like. The club shaft is commonly formed from a selected metal or metal alloy, or alternately from a nonmetallic composite material such as a graphite-based composite. The club shaft is normally connected to the associated club head by means of a hosel which extends angularly upwardly from a heel end of the club head.

A wide variety of golf club display arrangements and devices have been used over the years to display golf clubs in a retail or other sales presentation environment. In many of these display arrangements, the golf clubs are supported in a generally inverted orientation, similar to the manner in which golf clubs are supported within a typical golf bag, for customer viewing and selection. The inverted golf clubs are thus disposed with their respective club heads presented upwardly for easy customer visibility. However, in many prior golf club display systems, the club shafts can be

rotated relatively easily about their respect axes, particularly due to the off-center connection of the club shaft to the hosel at the heel end of the club head. This results in orientation of the club heads in a variety of different rotational positions and a correspondingly disorganized and unattractive display appearance with the club heads often knocking or banging against each other. Attempts by sales personnel to provide a more attractive sales display by arranging the heads of multiple golf clubs in a tidy spaced-apart array with a common rotational orientation, are typically disrupted when the next customer removes a golf club from the display for closer inspection and/or test swinging and then replaces it.

An additional problem pertaining to golf club sales displays relates to attachment of a security tag to each unsold golf club for purposes of preventing merchandise theft. In this regard, security tags of a type designed for electronic detection as the merchandise is passed through a store exit door or the like are well known in the art. However, such security tags when attached to golf clubs have been relatively large and unsightly, and thus have further detracted from the appearance of the golf club sales display. Moreover, these security tags have often interfered with test swinging of the club by a customer.

The present invention is directed to an improved golf club display rack including means for supporting and retaining a group of golf clubs in an attractive and organized spaced-apart array for easy customer viewing and selection. The golf clubs are each rotationally oriented in the display rack with their respective clubs heads extending in a predetermined rotational direction, wherein each club can be returned quickly and easily to this predetermined orientation following removal from the display for customer inspection. In addition, the improved golf club display is compatible with attaching an electronic security tag to each golf club in a position and manner that does not interfere with the display appearance or with club inspection and testing by the customer.

SUMMARY OF THE INVENTION

In accordance with the invention, an improved golf club display rack is provided for supporting and retaining a plurality of golf clubs in a predetermined and attractive spatial array in a sales environment or the like. The display rack includes means for supporting each golf club in an inverted position with the head thereof retained in a predetermined rotational orientation in spaced-apart relation to other golf clubs in the display.

In the preferred form, the display rack generally comprises at least one platform having a plurality of upwardly open club ports formed therein, wherein each club port is lined by a recessed keyway. Each golf club has a support collar snugly mounted in a predetermined rotational orientation onto the club shaft thereof, wherein this support collar has a size and shape for sliding seated reception into a selected club port to support and retain the golf club on the platform. Each support collar has an outwardly extending key for mating reception into the keyway of the associated club port to orient the club head in a predetermined rotational position relative to the platform.

The support collar may carry or contain a security tag for electronic monitoring and detection to prevent unauthorized removal of the golf club from the sales premises. In this regard, the support collar comprises a pair of half-collar segments designed for snug interlocking mounting onto the associated club shaft, and for relatively quick and easy removal from the golf club with a special tool provided to sales personnel.

Other features and advantages of the present invention will become more apparent from the following detailed description taken in conjunction with the accompanying drawings which illustrate, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings illustrate the invention. In such drawings:

FIGURE 1 is a top perspective view of a golf club display rack embodying the novel features of the invention;

FIGURE 2 is an enlarged top plan view of the display rack of FIG. 1;

FIGURE 3 is an enlarged fragmented perspective view of the display rack of FIG. 1, showing a golf club in exploded relation therewith;

FIGURE 4 is an exploded perspective view illustrating components of a support collar for snug mounting onto a shaft of a golf club;

FIGURE 5 is a front elevation view of the support collar, with a golf club shaft shown in fragmented form;

FIGURE 6 is a side elevation view of the support collar, taken generally on the line 6-6 of FIG. 5;

FIGURE 7 is a rear elevation view of the support collar, taken generally on the line 7-7 of FIG. 6;

FIGURE 8 is a top plan view of the support collar, taken generally on the line 8-8 of FIG. 6;

FIGURE 9 is a bottom plan view of the support collar, taken generally on the line 9-9 of FIG. 6;

FIGURE 10 is an enlarged fragmented vertical sectional view of the support collar, taken generally on the line 10-10 of FIG. 5;

FIGURE 11 is a horizontal sectional view of the support collar, taken generally on the line 11-11 of FIG. 10;

FIGURE 12 is a horizontal sectional view of the support collar, taken generally on the line 12-12 of FIG. 10; and

FIGURE 13 is a fragmented perspective view illustrating a support collar removal tool.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

As shown in the exemplary drawings, an improved display rack referred to generally in FIGURES 1-3 by the reference numeral 10 is provided for supporting and displaying a plurality of golf clubs in an attractive, organized array for convenient viewing and selection by customers in a retail or other sales environment. The display rack 10 is shown to include an upper platform 12 supporting a plurality of wood-type golf clubs 14 in a suspended and inverted spatial array, and a lower bracket 16 supporting a plurality of iron-type golf clubs 18 in an inverted spatial array.

Each of the illustrative golf clubs 14 and 18 has a generally known overall construction to include an elongated club shaft 20 connected at a lower end by a hosel 21 generally to the heel end of an associated wood-type club head 22 or to the heel end of an associated iron-type club head 24, and a resilient grip 26 mounted generally at an opposite, upper end of the shaft 20. In this regard, each of the wood-type golf clubs 14 is shown in the form of a so-called metal wood club head of a type having a recessed, generally dome-shaped cavity 28 formed in the sole plate thereof, as shown and described in more detail in U.S. Patent 5,851,159 which in incorporated by reference herein. In accordance with one aspect of the invention, the display rack 10 supports and retains the wood-type clubs 14 in an inverted array with the heads 22 thereof presented upwardly, similar to the manner in which the clubs would be supported within a conventional golf bag (not shown), for optimal visibility of the metal wood-type club head 22 and particularly the dome-shaped sole plate cavity 28 therein to a customer.

The display rack 10 generally comprises a frame for supporting the platform 12 and the associated bracket 16 at selected vertical positions spaced above an underlying floor surface or the like. As shown in one preferred form, this display rack frame comprises a lower base 30 having a suitable size, shape and mass to provide the overall display rack 10 with a relatively low and stable center of gravity. This lower base 30 is connected near a rear edge thereof to a pair of upstanding frame posts 32 (FIG. 1)

which in turn have their upper ends connected to the upper platform 12 near a rear edge thereof. In addition, at a selected elevational position beneath the platform 12, the frame posts 32 are connected to the opposite ends of the lower bracket 16 shown with a generally C-shaped configuration extending forwardly from the frame posts 32 and curving across a front region of the display rack 10 with a forwardly convex geometry. This C-shaped lower bracket 16 generally underlies a forwardly open recessed pocket 34 (shown best in FIG. 2) formed in the upper platform 12.

The upper platform 12 has a plurality of upwardly open ports 36 (FIG. 3) formed therein, each defining a location for receiving and supporting one of the wood-type golf clubs 14. In this regard, FIG. 3 shows one illustrative club port 36 having a generally circular configuration but lined at one side by a recessed keyway or slot 38, shown extending rearwardly a short distance from the club port 36.

A support collar 40 is snugly or firmly mounted about the shaft 20 of each wood-type golf club 14, in a predetermined rotational orientation and at a selected or predetermined longitudinal position, for removably supporting the associated club 14 from the upper platform 12. As shown best in FIGS. 3-7 and 10, the support collar 40 has a tapered profile shape that expands from a relatively smaller cross section at a lower end thereof to a larger cross sectional size and shape at an upper end thereof. In accordance with one important aspect of the invention, the upper end of the support collar 40 is diametrically larger than the size of the associated port 36 formed in the platform 12, whereby the support collar 40 when slidably seated downwardly into the port 36 will support and retain the golf club 14 with respect to the platform 12.

In accordance with a further important aspect of the invention, each support collar 40 further includes a radially outwardly extending key 42 for mating slide fit reception into the keyway 38 lining the club port 36, so that the support collar 40 can be slidably seated into the platform port 36 in a single rotational orientation. Since the support collar 40 has been mounted onto the club shaft 20 in a predetermined rotational orientation, the club head

22 is oriented in a correspondingly predetermined rotational position relative to the platform 12, when the support collar 40 is seated into the associated port 36.

With this construction, as viewed in FIGS. 1-3, all of the wood-type golf clubs 14 are removably supported on the elevated platform 12, each in a predetermined rotationally oriented and spatially separated array that provides an attractive and organized sales display appearance. For example, as shown in one preferred array, the wood-type clubs 14 are suspended by the respective support collars 40 in a manner such that the clubs 14 are supported with a floating appearance above the base 30 and the underlying floor surface. The heads 22 of the clubs 14 are all oriented to extend in parallel, or in a common rotational direction relative to the platform 12, and in a selected spaced-apart geometry wherein the clubs can be viewed easily by customers for selection, testing and purchase. The head 22 of each club 14 can be visually observed and easily inspected by a prospective purchaser. In addition, each club 14 can be lifted and removed from the display rack easily for closer customer inspection and test swinging, if desired, followed by simple slide-fit replacement of the club 14 back into the display rack with the head 22 thereof in the same predetermined rotational orientation. In this regard, the club heads 14 are supported in a spaced array that minimizes or prevents knocking and banging of the club heads with each other in the course of individual club removal and replacement.

The illustrative drawings show the iron-type clubs 18 supported in an inverted orientation by the lower bracket 16. As shown, the generally C-shaped bracket 16 has a plurality of rearwardly open notches 44 (FIG. 2) formed therein in spaced relation to each other. In addition, the base 30 has a centrally formed recess 46 (FIG. 1) shown with a generally circular shape. Each iron-type golf club 18 is arranged with its grip end resting within a rear edge of the base recess 46, and a portion of the associated shaft 20 resting within a selected one of the bracket notches 44 with the head 24 in spaced

relation above the bracket 16. In this arrangement, each iron-type club 18 is supported with the shaft 20 leaning forwardly on the bracket 16.

Although not shown and described and detail herein, persons skilled in the art will recognize and appreciate that a suitable support collar 40 may also be mounted about the shaft 20 of each iron-type club head 24 for seating into the associated bracket notch 44 with the iron-type club 18 is placed into the display rack. In this regard, each of the bracket notches 44 may be formed to include a part-circular segment analogous to the platform ports 36, in combination with a keyway segment for unidirectional reception of the key 42 on the support collar 40. With this arrangement, the rotational orientation of each iron-type golf club 18 can also be predetermined relative to the specific bracket notch 44, so that the club heads 24 are supported and retained in a predetermined spatial array having an attractive and organized appearance, substantially without knocking or banging together of the club heads.

FIGS. 4-12 illustrate the support collar 40 in one preferred from for quick and easy mounting onto the shaft 20 of each golf club. As shown, the collar 40 comprises front and rear, generally shell-shaped collar half segments 48 and 50 having a size and shape for mounting onto the club shaft 20 in face-to-face relation. In this regard, each collar segment 48, 50 has a hollowed interior for receiving and supporting a respective grommet 52 formed from a resilient elastomer or the like and defining half-circular upper and lower ends 54 interconnected by an axially extending connector strip 56. The two grommets 52 are fitted onto the club shaft 20 in face-to-face orientation, and the two collar segments 48, 50 are then fitted thereover in face-to-face relation. A pair of inwardly protruding undercut lock arms 57 (FIGS. 4 and 11) on the rear collar segment 50 are positioned for snap-fit interlocking engagement with a corresponding pair of inwardly protruding and undercut lock tabs 58 (FIG. 11) on the front collar segment 48 to tightly interconnect the collar segments 48, 50 with the grommets 52 retained snugly against the club shaft 20. The illustrative drawings show these lock tabs 58 formed on a cap 60 that is press-fit installed into a window 62 (shown

best in FIGS. 4 and 11) formed in the front collar segment 48. In this manner, the support collar 40 is firmly mounted onto the club shaft 20 in a selected rotational orientation, and at a selected longitudinal position. The key 42 protrudes from the rear collar segment 50 for appropriate seated reception into the keyway 38 lining the associated club port 36, as previously described.

In accordance with a further aspect of the invention, the support collar 40 may beneficially encase and retain a security tag 64 (FIGS. 4 and 10) of a type designed for electronic monitoring and detection for preventing unauthorized removal of merchandise from the premises. FIGS. 4 and 10 show this security tag 64 installed within the interior of the collar 40, generally at an inboard side of the press-fit cap 60. This installation thus provides the security tag in a location that does not detract from the desirable attractive and organized appearance of the golf club display.

When a club 14 or 18 is purchased by a customer, FIG. 13 depicts one exemplary tool 65 for quickly and easily removing the support collar 40 (with security tag 64 therein) from the golf club. This exemplary tool 65 comprises a base platen 66 having a cavity 68 formed therein for nested reception of the front segment 48 of the support collar 40, and adjoining portions of the club shaft 20. A tool head 70 is mounted on the platen 66 on a spring-loaded pin 72 for vertical descending of a tool tip 74 having a spaced-apart pair of downwardly protruding prongs 76. These prongs 76 are sized and shaped for reception into a corresponding pair of release ports 78 (FIGS. 7 and 11) formed in the rear collar segment 50. When pressed into the collar release ports 78, the prongs 76 engage ramped inboard surfaces 80 of the lock arms 57 to spread and release the lock arms 57 from the lock tabs 58, and thereby permit separation and disassembly of the support collar segments 48, 50 from the club shaft 20. The thus-removed support collar 40 can be re-used.

A variety of further modifications and improvements in and to the improved golf club display rack 10 of the present invention will be apparent to those persons skilled in the art. For example, it will be apparent that the

one or more of the platforms 12 may be used in a variety of different spatial arrays for supporting and displaying the clubs. In addition, it will be recognized and appreciated that the support collar 40 can be advantageously constructed from lightweight materials for minimally impacting testing swinging of a golf club removed from the display rack by a customer. Moreover, persons skilled in the art will understand that alternative cross sectional geometries for the support collar 40, with related alternative configurations for the platform port 36 and related keyway 38 can be used for supporting and retaining each club in the desired rotational orientation. Accordingly, no limitation on the invention is intended by way of the foregoing description and accompanying drawings, except as set forth in the appended claims.